## WHAT IS CLAIMED IS:

1. A method of analyzing of data streams in a communications network modeled by several layers, the method comprising the following steps:

capturing a datastream;

for a given network layer, analyzing the totality of the stream in order to determine the protocol or protocols present;

producing different streams corresponding to at least one protocol present; and

reiterating said analyzing step for a higher layer if any.

2. The method according to claim 1, comprising the following steps:

1) analyzing the captured packet:

1.a) if the packet is not recognized, passing to the next packet;

1.b) if the packet is recognized, eliminating the packet from the captured stream, searching for an existing stream in order to insert the packet, and if there is no existing stream, generating a new stream,

2) analyzing the streams generated at the step 1);

3) releasing the resources.

3. The method according to claim 1 comprising, further comprising:

retrieving a list of the protocols liable to appear at the level considered;

carrying out a frame-by-frame analysis of the stream in making a frame sequentially confront all the protocol signatures envisaged so long as the frame is not associated with a signature;

retrieving the rule by packet of each frame recognized;

classifying the frames as a function of the rules and positioning them in distinct streams;

carrying out a total analysis of the distinct streams in using the recognized protocol or protocols;

associating the stream rule coming from the analysis.

4. The method according to claim 1, wherein the total analysis of the streams is made by means of tests of statistical or protocol analysis.

5. The use of the method according to claim 1, in the analysis of data in a network having the TCP/IP protocol.

6. The device for the analysis of data streams in a communications network capable of being modeled in several layers, the device comprising at least one processor adapted to implement the method comprising the following steps:

capturing a datastream,

for a given network layer, analyzing the totality of the stream in order to determine the protocol or protocols present;

producing different streams corresponding to at least one protocol present;

reiterating the step of analysis for a higher layer if any.

7. The device according to claim 6, wherein the processor is adapted to:

1) analyze the captured packet;

1.a) if the packet is not recognized, passing to the next packet;

1.b) if the packet is recognized, eliminating the packet from the captured stream, searching for an existing stream in order to insert the packet, and if there is no existing stream, generating a new stream;

2) analyzing the streams generated at the step 1)'

3) releasing the resources.

8. The device according to claim 6, wherein the processor is adapted to:

retrieve the list of the protocols liable to appear at the level considered;

carry out a frame-by-frame analysis of the stream in making a frame sequentially confront all the protocol signatures envisaged so long as the frame is not associated with a signature;

retrieve the rule by packet of each frame recognized;

classify the frames as a function of the rules and positioning them in distinct streams;

carry out a total analysis of the distinct streams in using the recognized protocol or protocols;

associate the stream rule coming from the analysis.

9. The device according to claim 6, wherein the total analysis of the streams is made by means of tests of statistical or protocol analysis.

10. The method according to claim 2, wherein the total analysis of the streams is made by means of tests of statistical or protocol analysis.

11. The method according to claim 3, wherein the total analysis of the streams is made by means of tests of statistical or protocol analysis.

12. A device for the analysis of data streams in communications network capable of being modeled in several layers, the device comprising at least one processor adapted in implementing the method comprising:

capturing a means for capturing a datastream;

analyzing means for analyzing for a given network layer, the totality of the stream in order to determine the protocol or protocols present;

producing means for producing different streams corresponding to at least one protocol present;

reiterating the step of analysis for a higher layer if any.

13. The device according to claim 12, further comprising:

1) analyze means for analyzing the capture packet;

1.a) if the packet is not recognized, passing means for passing to the next packet;

1.b) if the packet is recognized, eliminating means for eliminating the packet from the captured stream, searching for an existing stream in order to insert the packet, and if there is no existing stream, g enerating a new stream;

2) analyze means for analyzing the streams generated at the step 1);

3) release means for releasing the resources.

14. The device according to claim 6, further comprising:

retrieving means for retrieving the list of protocols liable to appear at the level considered;

carrying means for carrying out a frame-by-frame analysis of the stream in making a frame sequentially confront all the protocol signatures envisaged so long as the frame is not associated with a signature;

second retrieving means for retrieving the rule by packet of each frame recognized;

classifying means for classifying the frames as a function of the rules and positionint them in distinct streams;

second carrying means for carrying out a total analysis of the distinct streams in using the recognized protocol or protocols;

associating means for associating the stream rule coming from the analysis.

15. The device according to claim 14, wherein the total anlaysis of the streams is made by means of tests of statistical or protocol analysis.